1.01 **DIAGNOSTIC TESTING, MALFUNCTION INDICATION, OR ELECTRICAL CONDITION MEASUREMENT**
1.02 .Of audio message storage and retrieval
1.03 .Of data transmission
1.04 ..Qualifying line for data transmission
2 .Including fault responsive disconnection of tested component
3 .Of hybrid or echo suppressor or canceller
4 .Of repeater
7 .For detection of eavesdropping device
8 .With blocking of normal usage
9 .Of centralized switching system
9.01 ..Software compatibility
9.02 ..Maintenance console
9.03 ..Trouble ticket reporting
9.04 ..Record or report generation
9.05 ..Backup system
9.06 ..Of line interface circuitry
14 ..Of plural exchange network
14.01 ...Fault segmentation (e.g., error location in network)
10.01 ..By automatic testing sequence
10.02 ...By call generator
10.03 ...Script file generation or execution
11 ...Routiner
12 ..With dedicated testing line or trunk
13 ..Of call timing or charging equiment
15.01 ..Of switching equipment or network element
15.02 ...Advanced intelligent network (AIN)
15.03 ....Provisioning of service
15.04 ....Of plural AIN elements
15.05 .....Determining fault location
16 ...Of switching path
17 ...Of switching selector
18 ...By use of call address signal
19 ...Rapid manual connecting structure for test equipment
20 ..Of switchboard element condition (e.g., lamp)
21 .Using portable test set (e.g., handset type)
22 .Of trunk or long line
22.01 ..By loopback
22.02 ..By analysis of injected tone signal
22.03 ..Fault detection or fault location on telephone link (e.g., continuity, leakage)
22.04 ...Of digital loop carrier
22.05 ....Pair gain test controller
22.06 ...Having special connector
22.07 ...Telephone multiconducting wires (e.g., tip, ring and ground wires)
22.08 ...Noise
23 ..Of line signalling
24 ..Electrical parameter measurement (e.g., attenuation)
25 ..Conductor identification or location
26.01 .Testing of network terminating interface, subscriber trunk interface, or service function
26.02 ..With a programmable or self-test device
27.01 .Testing of subscriber loop or terminal
27.02 ..By generating call signal
27.03 ..By analysis of testing signal
27.04 ..By automatic testing sequence (e.g., programmable, test, script or test call generation program)
27.05 ..Having protection circuit (e.g., surge or short circuit protector)
27.06 ..Having electromechanical switch or relay
27.07 ..Having plugging maintenance or test module
27.08 ..Including sampling measurement technique
28 ..Of data transmission instrument
29.01 ..Terminal arrangement to enable remote testing (e.g., testing interface)
29.02 ...By simulator (e.g., computer simulates testing personnel)
29.03 ...Voltage or current determination
29.04 ...Voltage or current detector
29.05 ...Metallic loop testing
29.06 ...By dialing back the calling terminal

29.07 ...For a fault caused by an off-hook status
29.08 ...For a fault caused by new added service or equipment (e.g., software compatible)
29.09 ...With historical operating information database
29.1 ...Visual output (e.g., printing, displaying)
29.11 ...Having telephone maintenance termination unit (e.g., MTU)
30 ..Loop impedance (e.g., resistance, capacitance)
31 ..Of line signalling generator (e.g., dial, tone code generator)
32.01 .Monitoring
32.02 ..Trunk or long line
32.03 ...AIN link
32.04 ..Subscriber line
32.05 ..Call tracing
33 ..Alarm or emergency (e.g., cut line)
35 ..Listening-in or eavesdropping type
36 **FREE CALLING FROM PAYSTATION**
37 **EMERGENCY OR ALARM COMMUNICATIONS (E.G., WATCHMAN'S CIRCUIT)**
38 .Personal monitoring (e.g., for the ill or infirm)
39 .Responsive to sensed nonsystem condition
40 ..Automatic dialing
41 ..Transmission of recorded audio message
42 ..Plural conditions
43 ..Fire
44 ..Intrusion
45 .Central office responsive to emergency call or alarm (e.g., "911", operator position display)
46 .Called line or station condition responsive (e.g., recall if busy)
47 .Plural alarms over single line
48 .Announcement or alarm received at terminal station (e.g., "butt-in", alarm)
49 .Central station with plural substations
50 .By pulse or digital signal
51 .With automatic dialing or transmission of recorded audio message
52 **INCLUDING AID FOR HANDICAPPED USER (E.G., VISUAL, TACTILE, HEARING AID COUPLING)**
55.1 **HAVING NEAR FIELD LINK (E.G., CAPACITIVE, INDUCTIVE)**
56.1 **HAVING LIGHT WAVE OR ULTRASONIC LINK FOR SPEECH OR PAGING SIGNAL**
56.2 .Including fiber optic link within telephone network
56.3 .Including infra-red link with landline telephone network
67.1 **AUDIO MESSAGE STORAGE, RETRIEVAL, OR SYNTHESIS**
68 .Dynamic audio signal recording or reproduction
69 ..Call originating
70 ..Call intercept or answering
71 ...Consecutive use of recorded phrases or words to form message
72 ...Sequential or repeated announcement during single call initiated cycle
73 ...Plural record carrier channels
74 ...Remote control over telephone line
75 ....Remote dictation
76 ....Announcement selection or replacement
77 ....Control by generated tone
78 ...Acoustic coupling
79 ...With specified call initiated cycle control circuitry
80 ....Voice signal presence responsive
81 ....Call termination responsive (e.g., hang-up)
82 ....Having specified call initiation (e.g., ringing) responsive circuitry
83 ....Structural detail of storage medium drive
84 ...At switching facility (e.g., central office, switchboard)
85 ..Recording of telephone signal during normal operation
86 ...Inductive pickup
87 ..Reproduced signal distributed over telephone line
88.01 .Voice activation or recognition

88.02 ..Voice verification (e.g., voice authorization, voiceprint, etc.)
88.03 ..Voice dialing
88.04 ..Voice controlled message management
88.05 .Multilingual system or operation
88.06 ..Language selection
88.07 .Digital signal processing (DSP)
88.08 .Message signal analysis
88.09 ..Statistical analysis (e.g., time, date, length of message, etc.)
88.1 ..Including data compression
88.11 .Display of message related information
88.12 .Indication or notification of message
88.13 .Multimedia system (e.g., voice output combined with fax, video, text, etc.)
88.14 ..Presentation format conversion
88.15 ..Pager activation
88.16 .Voice message synthesis
88.17 .Interaction with an external nontelephone network (e.g., Internet)
88.18 .Interacting voice message systems
88.19 .Call source identification
88.2 ..Automatic Number Identification (ANI)
88.21 ..Caller identification received at substation
88.22 .Message management
88.23 ..Controlled by subscriber or caller
88.24 ...By generated tone
88.25 ...Message storage in centralized location (e.g., central office, PBX, etc.)
88.26 ....Recording voice message from non subscriber caller
88.27 ..Separate storage for voice and control information
88.28 ..Solid state memory storage
90.01 **TELEPHONE LINE OR SYSTEM COMBINED WITH DIVERSE ELECTRICAL SYSTEM OR SIGNALLING (E.G., COMPOSITE)**
91.01 .Credit authorization
91.02 ..At switching station
92.01 .Polling
92.02 ..Televoting
92.03 ..Having central station equipment
92.04 ..Having subscriber station equipment
93.01 .Having transmission of a digital message signal over a telephone line
93.02 ..Access restricting
93.03 ...Personal identification
93.04 ...Two or more calls
93.05 ..Terminal interface circuitry
93.06 ...Digital
93.07 ...To plural lines or networks
93.08 ..Transmission scheme (e.g., compression/decompression, transmission rate)
93.09 ..Switching between different terminal types (e.g., voice/data switch)
93.11 ...Among at least three terminal types
93.12 ..Sales, ordering, or banking system
93.13 ..Amusement (e.g., game, lottery)
93.14 ..Having switching station
93.15 ...Having format conversion
93.17 ..Having station display
93.18 ...Having tone code recognition for generating alphanumeric characters
93.19 ...Having pressure or position sensitive surface (e.g., touch-screen, light pen)
93.21 ...Having conferencing
93.22 ...At pay station
93.23 ...Having user information display (e.g., telephone number, name, address, etc.)
93.24 ...Having electronic mail
93.25 ...Having remote database (e.g., videotex system)
93.26 ..By voice frequency signal (e.g., tone code)
93.27 ...Alphanumeric
93.28 ...Modulated audio tone
93.29 ....Reconfigurable
93.31 ....Protocol
93.32 .....Initial setup
93.33 .....Having adjustable speed
93.34 .....Having recognition and selection
93.35 ....Having call-waiting
93.36 ....Line powered
93.37 ...Having acoustic link

100.01 .To produce visual-graphic copy (e.g., facsimile)
100.02 ..Having detachable device (e.g., detachable storage medium, scanner)
100.03 ..Usage system
100.04 ..Communication charge calculation
100.05 ..Monitoring
100.06 ..Communication status notification
100.07 ..Using mark sheet
100.08 ..Electronic mailbox
100.09 ..Relay system
100.11 ..From a library
100.12 ..Connection to plural networks or lines
100.13 ..Format conversion
100.14 ..Call signal generation (e.g., auto-dial)
100.15 ..Having switching to other communication modes
100.16 ...Voice mode
100.17 ..Transmission scheme
101.01 .Audio program distribution
102.01 .Remote control
102.02 ..Communication device
102.03 ...Entertainmemt appliance (e.g., TV, VCR, radio, etc.)
102.04 ...Power source
102.05 ..Of heating, ventilation, air conditioner (e.g., HVAC)
102.06 ..Of physical entrance or exit lock
102.07 ..Having indication
106.01 .Remote indication over telephone line (e.g., telemetry)
106.02 ..Patient monitoring
106.03 ..Meter reading
106.04 ...Having power supply circuitry
106.05 ...Having ringing suppression
106.06 ...Having time window
106.07 ...Having interrogation signal
106.08 ...Having line status detection
106.09 ..Ringing suppression
106.11 ..Interrogation signal
108.01 .Telegraphy
108.02 ..Over telephone line
110.01 **COMPOSITE SUBSTATION OR TERMINAL (E.G., HAVING CALCULATOR, RADIO)**
111 **WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC REGISTER)**
112.01 .Call traffic recording by computer or control processor
112.02 ..Redundant processor or backup processor
112.03 ..Estimating blocking probability
112.04 ..Threshold or limiting control (e.g., gapping control)
112.05 ..Optimization network configuration
112.06 ..Generalized statistics about telephone network usage
112.07 ...Carrier usage data
112.08 ...Trunk or path usage data
112.09 ...Specialized exchange
112.1 ...Traffic rate for overload
114.01 .Call charge metering or monitoring
114.02 ..Least cost
114.03 ..Billing computing software or program
114.04 ..Charge error detection
114.05 ..Special service fees (e.g., customized feature)
114.06 ..Variable rate
114.07 ...Bandwidth
114.08 ...Traffic
114.09 ...Time controlled
114.1 ..Incentive billing
114.11 ...Gaming
114.12 ...Discount or bargaining
114.13 ...Advertisement
114.14 ..Fraud detection or control
114.15 ..Calling card
114.16 ...Recharging or replenishing an account or calling card
114.17 ...Monitoring account or card usage balance
114.18 ...Having complementary item (e.g., novelty)
114.19 ...Credit card
114.2 ...Pre-paid calling account or card
114.21 ..Redirect billing
114.22 ...Split billing or cost sharing
114.23 ...Third party billing
114.24 ...1-800 billing
114.25 ...1-900 billing
114.26 ...Based on unique account code
114.27 ..Portable number billing
114.28 ..Advanced intelligent billing network (e.g., a billing service control processor)

114.29 ...Using more than one advanced intelligent elements (e.g., accessing multiple AIN databases)
115.01 ..Interexchange billing operation
115.02 ...Long distance billing
115.03 ...Interfacing with foreign exchange
116 ...Hardcopy record generating
117 ..Of station on polystation or party line
118 ...Identification of station
119 ..Hardcopy record generating (e.g., ticket printing)
120 ...With line identification or class of service determination
121.01 ..At local exchange carrier (e.g., central switching office)
121.02 ...Discount charge rate or billing plan
121.03 ...Multiple billing account
121.04 ...Detail of call history and rates database
121.05 ....Call record modification
121.06 ...Having network terminating point receiving registration from subscriber terminal
122 ...With display
123 ...Paystation (e.g., escrow control)
124 ...Pulse counting or accumulating (e.g., "message metering")
125 ....Local or zone
126 ....Assembling billing record (e.g., automatic message account (AMA), call detail record (CDR), etc.)
127.01 .....Having line identification associated with call billing (e.g., automatic number identification (ANI)
127.02 ......Fraud control or billing restriction
127.03 ......Billing code or trigger code
127.04 ......Pricing a call made from different account (e.g., calling card, credit card)
127.05 ......Billing option selection
127.06 ......Having terminal identification
128 ....Time of day controlled
129 ...Manually set (e.g., key and lock)
130 ..At subscriber station
131 ...Time controlled
132 ....Paystation (e.g., escrow control)
133 .Call traffic recording or monitoring
134 ..At central station
135 ...With hardcopy record generation (e.g., ticket printing)
136 ...With display
137 ...Trunk usage (e.g., peg count)
138 ....All trunks busy metering
139 ...Counting the number of completed connections
140 ..At subscriber
141 ...Mechanical register
142.01 **RECEPTION OF CALLING INFORMATION AT SUBSTATION IN WIRELINE COMMUNICATIONS SYSTEM**
142.02 .Blocking caller ID transmission
142.03 ..Using a trigger code
142.04 .Extracting call ID from transmitted signal
142.05 ..Authentication or authorization
142.06 ..Matching and retrieving stored caller ID information from a database
142.07 .Routing an incoming call on multiple lines to a particular appliance (e.g., facsimile, computer, or telephone)
142.08 .Call waiting associated with caller ID information
142.09 .Non-assigned telephone number indication
142.1 .Caller location indication (e.g., city, state, etc.)
142.11 .Caller local time indication
142.12 .Including master-slave modules, parent-child terminals, or controller-adjunct units
142.13 .Adaptive module coupled to telephone line or telephone device
142.14 ..Format conversion
142.15 .Connecting to an external information processing terminal (e.g., computer)
142.16 .Having broadband premise equipment (e.g., TV)
142.17 .Having display unit
142.18 .Including DTMF signal
143 **WITH CHECK OPERATED CONTROL (E.G., PAYSTATION)**

144.01 .Other than coin
144.02 ..Collect calling from payphone
144.03 ..Fraud detection in payphone
144.04 ..Card reader
144.05 ..Payphone service associated or integrated with other communication device (e.g., computer, fax, etc.)
144.06 ..Special circuitry for processing accounting data
144.07 ..Information message notification at paystation
144.08 ...Visual display
145 .Fraud or interference prevention
146 .Coin signalling or control
147 ..Coin box audit or totalizer
148 ..Denomination
149 ..Post-pay coin collection
150 ..Coin disposition (i.e., return or collection)
151 ...Upon connection to called station
152 ...Magnet, electromagnet, or relay controlled from central office
153 ...Paystation (e.g., controlled by refund key)
154 .At central office
155 .At terminal station (e.g., coin paystation)
156 **MULTI-LINE OR KEY SUBSTATION SYSTEM WITH SELECTIVE SWITCHING AND CENTRAL SWITCHING OFFICE CONNECTION**
157 .With special service
158 ..Conferencing
159 .With intercom system
160 ..With connection of intercom station to subscriber line
161 .With exclusion or priority feature (e.g., lockout or privacy)
162 .Detail of hold circuitry
163 ..Electronic
164 .Line status indication or call alerting
165 .Switching or supervision feature (e.g., common control, digital)
166 .Detail of line circuit or line card
167.01 **PRIVATE (E.G., HOUSE OR INTERCOM) OR SINGLE LINE SYSTEM**
167.02 .At collective house
167.03 .At booth (e.g., at theater, gas station, etc.)
167.04 ..Having intercom switch
167.05 .Doorbell system
167.06 ..Having access code
167.07 ..Having remote controlling station (e.g., gate guard or attendant)
167.08 ..Call addressing or announcing
167.11 ..Having connection to telephone line
167.12 ..Having display
167.13 .Having telephone adaptor system
167.14 .Two-way voice channel
167.15 .Having transducer circuitry
168 .Lockout
169 ..Central power source
170 .With paging
171 .Having plural stations with selective calling (e.g., master)
172 ..With call addressing
173 .With call addressing
174 .Including body or apparel supported terminal (e.g., headgear)
175 ..For underwater use (e.g., in diver's suit)
176 .With central power source
177 **POLYSTATION LINE SYSTEM (I.E., PARTY LINE)**
178 .Revertive call
179 .Call alerting (e.g., ringing)
180 ..Full selective or tuned (e.g., harmonic)
181 ..Semi-selective (e.g., line side, polarized)
182 .Automatic or unattended
183 ..Station identification
184 ..Lockout
185 .Portable or mobile
186 .Central power source
187 .Connected to central office
188 **CALL OR TERMINAL ACCESS ALARM OR CONTROL**
189 .Fraud or improper use mitigating or indication (e.g., "blue box", "black box")
190 .Time out
191 ..At switching center
192 ...Of call duration (e.g., conversation timer)
193 ...Of specific equipment
194 .Lockout or double use signalling
195 ..In automatic system

196 .At switching center
197 ..Central office
198 ..PBX
199 .At substation
200 ..Restrictive dialing circuit
201.01 **SPECIAL SERVICES**
201.02 .Service profile (e.g., calling service)
201.03 ..Creation of service (e.g., using object oriented programming, primitive, function)
201.04 ..Display arrangement
201.05 ..Distribution of service (e.g., downloading, uploading)
201.06 .Locating using diverse technology (e.g., using infrared badge, sensor, card reader)
201.07 ..Called party
201.08 ..Calling party
201.09 ..Object
201.1 ..Detecting presence or absence of party or object
201.11 .Anonymous party (e.g., protection of called or calling party's identity, privacy)
201.12 .Provisioning
202.01 .Conferencing
203.01 ..Operator control
204.01 ..Subscriber control
205.01 ...Conferencing initiation by single calling station
206.01 ..At substation
207.01 .Three-way calling
207.02 .Service trigger (activation or deactivation)
207.03 ..Time (e.g., time of day, expiration of time period, time zone, date)
207.04 ..Line or loop condition
207.05 ...Busy signal (e.g., off hook)
207.06 ...Transition from off-hook to on-hook (e.g., busy to idle, hook flash)
207.07 ...Transition from on-hook to off-hook (e.g., idle to busy)
207.08 ...No answer (e.g., ringing signal, on-hook, idle)
207.09 ....Number of rings
207.1 ....Expiration of predetermined time period
207.11 ..Service access code
207.12 ..Party location
207.13 ..Party identification or validation (e.g., personal identification number (PIN))
207.14 ..Dialed number identification service (DNIS)
207.15 ..Automatic number identification or calling number identification (ANI or CLID)
207.16 ..Ringing signal (e.g. having a predetermined cadence or distinctive ring)
208.01 .Priority override (e.g., butt-in)
209.01 .Repetitive call attempts (e.g., camp-on-busy, retry)
210.01 .Reserved call (e.g., return call, call back, scheduled call, reestablished call)
210.02 .Call blocking
210.03 ..Call from anonymous caller
211.01 .Call diversion (e.g., call capture)
211.02 ..Call forwarding
211.03 ...Sequential ringing
211.04 ...Simultaneous ringing
211.05 ...Smart card
212.01 ..Call transfer
213.01 ..Intercept (e.g., dead or changed number)
214.01 ..Secretarial or answering service
215.01 .Call Waiting
216.01 .Abbreviated dialing or direct call (e.g., hot line)
217.01 .Audible paging
218.01 .Automatic directory service (e.g., on-line)
218.02 .Performed by operator (e.g., butt-in, busy verification)
219 **PLURAL EXCHANGE NETWORK OR INTERCONNECTION**
220.01 .With interexchange network routing
221.01 ..Alternate routing
221.02 ...Service provider selection (e.g., local or long distance, primary and alternate carriers)
221.03 ...Failure (e.g., disaster, overload, blockage)
221.04 ....Restoration (e.g., backup, recovery)
221.05 ..Based upon historical data
221.06 ..Algorithm (e.g., software, computer program)

221.07 ...Parameter optimization or enhancement (e.g., capacity or bandwidth)
221.08 ..Advanced intelligent network (AIN)
221.09 ...Service control point (SCP, ISCP, external database)
221.1 ...Signal transfer point (STP, ISTP)
221.11 ...Adjunct or intelligent peripheral (IP)
221.12 ...Service switching point (SSP)
221.13 ..Local number portability (LNP)
221.14 .Routing parameter (e.g., area code, address, service provider identifier)
221.15 .Connection call model (e.g., virtual network, displayed models)
222 .Toll center
223 ..With operator assistance
224 .Tandem switching center
225 .Multi-PBX interconnection
226 .Having a manual exchange
227 ..With an automatic exchange
228 ...Having signalling to operator
229 .Interexchange signalling
230 ..Signalling path distinct from trunk (e.g., CCIS)
231 ..Central office-to-PBX signalling
232 ...PBX trunk groups
233 ...Direct inward dialing
234 ..PBX to central office signalling (e.g., direct outward dialing)
235 ..Voice frequency signalling over trunk
236 ..D.C. signalling over trunk
237 ...Pulse or digital signalling
238 ....Having signalling repeater
239 ....Using register-sender
240 ..Interexchange trunk circuit
241 ...Glare or simultaneous seizure mitigation
242 **CENTRALIZED SWITCHING SYSTEM**
243 .Class of service determination or transmission
244 ..In common control system
245 .Identification
246 ..Of line or trunk
247 ...With display
248 ...Using matrix
249 ...For nuisance call mitigation
250 .Four-wire switching
251 .With generating of call associated substation signal
252 ..For alerting signal at called station (e.g., ringing)
253 ...Electronic
254 ...Associated with connector
255 ...With interrupter
256 ..Having automatic or through ringing
257 ..For calling station (e.g., status or progress tones)
265.01 .Call distribution to operator
265.02 ..Automatic call distributor (ACD) system
265.03 ...Reporting status (e.g., supervisory reporting)
265.04 ....Log-on or log-off of agent
265.05 ....Agent assignment (e.g., allocation of agent's time to a specific task)
265.06 ....Monitoring agent performance (e.g., quality of agent's performance)
265.07 .....Speech of agent or customer (e.g., talk time)
265.08 .....Average call length
265.09 ...Having a multimedia feature (e.g., connected to Internet, E-mail, etc.)
265.1 ...Predictive (e.g., anticipating next available agent)
265.11 ...Routing to available agent
265.12 ....Based on agent's skill (e.g., language spoken by agent)
265.13 ....Based on type of call
265.14 ....Based on time (e.g., longest waiting agent)
266.01 ...Call or agent queuing
266.02 ....Based on type of call
266.03 ....Based on time (e.g., age of queued call, time of day, date)
266.04 ....Overflow (e.g., queue-to-queue, ACD-to-ACD)
266.05 ....Split
266.06 ....Estimating or reporting waiting time
266.07 ...Call campaign (e.g., script, application, inbound/outbound balancing)
266.08 ....Predictive algorithm
266.09 ...Home agent
266.1 ...Call record

258 .Switching controlled in response to called station addressing signal
259 ..Including deflected electron beam switching device or mechanical or optical switching control (e.g., fluidic)
260 ..With operator position or completion of call (e.g., dial "O", semiautomatic)
261 ...Operator controlled register-sender
262 ...Call extension by operator
263 ....With call indicator or announcer
264 ....A to B operator
267 ...Operator's console
268 ..Having shared or common switching control
269 ...Distributed control
270 ...In-stage or interstage scanning (e.g., link scanning)
271 ...Having multistage switching
272 ....Path selection or routing
273 .....Alternate routing
274 ......With busy or idle test
275 .....Including marking circuit
276 ......End-to-end marking (e.g., self-seeking)
277 .....With busy or idle test
278 ....Interstage junctor or "trunk"
279 ...Control reliability (e.g., redundancy)
280 ...Including registering or storing device for call address signal
281 ....Conversion between dial pulse and voice frequency signal
282 ....Voice frequency receiver
283 .....Dual tone multifrequency (DTMF) receiver
284 ....With processor
285 ....With magnetic memory
286 ....Signal processing (e.g., dial pulse analysis)
287 ....Electronic
288 ....Register-sender
289 ...Translator
290 ...With time division of control or supervisory signals
291 ...With detail of crosspoint switching structure (e.g., crossbar)
292 ....Electronic crosspoint (e.g., solid-state)
293 ..Having line finder
294 ...Including electronic element (e.g., tube or semiconductor)
295 ...Plural
296 ..With repeater
297 ..Having specified busy-idle test
298 ..Direct control
299 ...Step-by-step system
300 ....Having plural wiper sets
301 ....Having potential control
302 ....Having rotary switch
303 ....Coordinate system (e.g., X-Y)
304 ...All relay type
305 ...Having motor-driven switch
306 ..With crosspoint switch detail
307 ..With power supply
308 .Switching apparatus for connecting calling line to operator's position
309 ..Call distribution or queuing
310 .Divided central (e.g., communication between switchboards)
311 ..Having signalling path feature
312 .Having multiple answering jacks for multiplied line
313 .Multiple section switchboard
314 ..Auxiliary (e.g., overflow)
315 .With line-signal control
316 ..Spring-jack cut-off
317 ..Relay cut-off
318 ..Central power source
319 .Single switchboard (e.g., cord circuit)
320 ..Switchboard circuit
321 ...Connection to operator's terminal
322 .Power supply
323 ..Power to switching equipment
324 ..Central power source (e.g., common battery, line current feed)
325 .Structure of equipment
326 ..Wire or cable distribution
327 ...Main or intermediate distribution frame
328 ..Equipment mounting or support
329 ...Allowing movement of equipment (e.g., movable, modular)
330 ..Housing
331 .Having protective circuit
332 .Plug and socket

333 **CONCENTRATOR OR TRUNK SELECTOR**
334 .Concentrator-distributor pair (e.g., line concentrator)
335 .Using crossbar or crosspoint switching
336 .With magnet, electromagnet, or relay
337 .With busy-idle test (e.g., idle trunk finder)
338 **REPEATER (E.G., VOICE FREQUENCY)**
339 .With signal conversion (e.g., dial to DTMF, analog to PCM)
340 .Having line length compensation or equalization
341 .Pulse or tone repeater (e.g., electromechanical relay)
342 ..Electronic (e.g., logic circuitry)
343 .Controlled by a pilot or reference signal
344 .Component processes bidirectional signals
345 ..Including two-to-four wire conversion or hybrid circuit
346 .With frequency discriminator or negative impedance element
347 .With gain or attenuation control
348 .Transmission of power to distant repeater
349 .Having voice frequency transformer
406.01 **ECHO CANCELLATION OR SUPPRESSION**
406.02 .Combined diverse function
406.03 ..Additional signal enhancement (e.g., voice processing or recognition)
406.04 .Disable or inhibit function
406.05 .Residual echo cancellation
406.06 .Using digital signal processing
406.07 ..Using attenuator
406.08 ..Adaptive filtering
406.09 ...Least mean squares (LMS) algorithm
406.1 ...With training sequence
406.11 ..Convolution processing
406.12 ..Frequency domain analysis
406.13 ...Fourier analysis
406.14 ...Sub-band analysis
406.15 ..Additional analog processing
406.16 .Having analog variolosser or attenuator
350 **SUPERVISORY OR CONTROL LINE SIGNALING**
351 .Signalling integrity protection (e.g., voice signal immunity)
352 .Substation originated
353 ..Conversion of signal form
354 ..With called number display
355.01 ..Repertory or abbreviated call signal generation
355.02 ...Call address signal stored in terminal
355.03 ....Including terminal other than telephone
355.04 ...Call address signal stored in network
355.05 ...Modification of call address signal for abbreviated dialing
355.06 ....Modification by other than key input
355.07 ....Including modification of indicia associated with a call address
355.08 ...Including prefix in the call address signal
355.09 ...Selection of registered call address signal
355.1 ....Selection of multiple call address signals
356.01 ...Including dynamic memory
357.01 ...Insertable control element or circuitry (e.g., card)
357.02 ....Personal computer memory card (PCMCIA)
357.03 ...Acoustical generation
357.04 ...Circuitry of call signal generator
357.05 ...Including solid state memory storage
358 ...By motor driven dial rotating device
359 ...Pulse signal generating (e.g., dialing)
360 ..Voice frequency band signalling (e.g., reed devices)
361 ...Electronic (e.g., tone generator)
362 ..Pulse signal generator (e.g., rotary dial)
363 ...Control of motor driven dial rotating device
364 ...With nonrotary actuator (e.g., key or slide type)
365 ...Specified switching contact (e.g., contact spring)
366 ...With detail of dial return mechanism (e.g., driving spring, speed governor)
367 ...Finger wheel or mechanical adjunct (e.g., finger stop)

368 ..Plural-switch number input device (e.g., keypad)
369 ..Detail of mounting of switch pad or dial
370 ...In handset
371 ..Magneto signalling
372 .Signal reception at substation
373.01 ..Incoming call alerting
373.02 ...Distinctive or selective alerting
373.03 ....Registration of alerting signal in association with incoming signal
373.04 .....Recording audio for use as the alerting signal
373.05 ....Directing incoming call to local appliance
374.01 ...Including musical sound generation
374.02 ...Including audible message generation
374.03 ...Alerting by other than sight or sound (e.g., vibration)
375.01 ...Having electronic call sounder (e.g., tone "ringer")
376.01 ...Visual indication of incoming call (e.g., LED or light bulb)
376.02 ..Silencing ring signal
377 .Using line or loop condition detection (e.g., line circuit)
378 ..With current controlling electromagnetic core device (e.g., Hall-effect device)
379 ..With optical link between line and switching system
380 ..By bridge circuit
381 ..Busy test or make busy
382 ..For ring trip or polarity reversal detection
383 ..Of plural lines
384 ...By scanning
385 ..Relayless
386 .Signal receiver (e.g., tone decoder)
387.01 **SUBSTATION OR TERMINAL CIRCUITRY**
387.02 .Conversion of signal form (e.g., A/D, frequency or phase)
388.01 .For loudspeaking terminal
388.02 ..Speakerphone with build-in microphone
388.03 ...Automatic gain or volumn (AGC or AVC)
388.04 ..Voice control of transmission direction
388.05 ...Voice switching by attenuation/amplification
388.06 ...Comparing signal level of receiving and transmitting circuits
388.07 ...Controlling acoustic feedback
390.01 ..Amplification or attenuation level control
390.02 ...Filtering (FIR, HPF, Widrow-Hoff, LMS)
390.03 ...Automatic gain control
390.04 ...Hybrid circuit
391 .Sidetone control or hybrid circuit (e.g., induction coil)
392 ..Suppression (e.g., antisidetone)
392.01 .Noise suppression
393 .Hold circuit
394 .Impedance matching or line equalizing
395 .Amplifying (e.g., AGC or AVC)
395.01 .Power control or detection circuit
396 .Visual signalling (e.g., lamp)
397 .Wire distribution
398 **LINE EQUALIZATION OR IMPEDANCE MATCHING**
399.01 **SUBSCRIBER LINE OR TRANSMISSION LINE INTERFACE**
399.02 .Circuitry to provide a coder and decoder function
400 .For line length compensation
401 ..Voltage boosting circuit
402 .Hybrid circuit
403 ..With adjustable balance circuit
404 ...Automatic adjustment
405 ..Electronic noninductive
412 .Protective circuit
413 .Power supply (e.g., battery feed)
413.01 ..Circuitry to provide ringing current supply
413.02 .Network interface device (NLD)
413.03 ..Including connection for alternate communication line (e.g., cable)
413.04 ..Connection block or module
414 **TRANSMISSION LINE CONDITIONING**
415 .Reactance neutralizing
416 .Interference suppression
417 ..Anticrosstalk
418 **CALL SIGNAL GENERATING (E.G., RINGING OR TONE GENERATOR) TERMINAL**
419

420.01 .Having loudspeaking conversation capability (e.g., hands- free type or speakerphone)
420.02 ..Hands-free loudspeaker feature
420.03 ..Hands-free microphone feature
420.04 ..Hands-free accesory or attachment
421 .Having muting
422 .Switch or switch actuator structure
423 ..Line selection
424 ..Receiver or handset position responsive (e.g., hookswitch)
425 ...With mechanism for latching hookswitch or plunger against motion
426 ...Movable holder for receiver or handset
427 ...Having plunger and lever linkage
428.01 .Housing or housing component
428.02 ..Handset or headset combined with telephone base
428.03 ..Display on telephone base
428.04 ..Base having detachable accessory
429 ..Having distinct circuitry support structure (e.g., circuit board)
430 ..Body supported (e.g., headgear)
431 ..Separate housings for earphone and microphone (e.g., candlestick type)
433.01 ..Handset structure
433.02 ...Speaker mounting (i.e., speaker phone feature)
433.03 ...Microphone mounting
433.04 ...Display on handset
433.05 ...Connector
433.06 ...Button or switch having specific function
433.07 ....Keypad
433.08 ...Battery
433.09 ...Card (e.g., SIM or magnetic strip card)
433.1 ...Handset having special feature (e.g., wrist watch)
433.11 ...Moveable or removeable element (e.g., cover)
433.12 ....Slideable mechanism
433.13 ....Rotatable mechanism (e.g., hinge)
432 ..Loudspeaking set
434 ..Specified terminal configuration (e.g., novelty type)
435 ..Wall set or convertible type
436 ..Desk set
437 ..Protective structure
438 ...Of cord or connector
439 ...Antiseptic
440 ..Casing or enclosure, per se
441 **TERMINAL ACCESSORY OR AUXILIARY EQUIPMENT**
442 .With circuit connection to terminal
443 .Including coupler (e.g., inductive)
444 ..Acoustic
445 .Locking device
446 .Telephone receiver support
447 .Attachable to terminal housing
448 ..Hookswitch operator
449 ..Handset holder (e.g., shoulder rest)
450 ..Clips onto terminal structure
451 .Protective structure
452 ..Antiseptic, disinfecting, or disposable
453 .Hood or enclosure (e.g., booth)
454 .Support or stand
455 ..Handset holder
456 .Dialing tool
457 **MISCELLANEOUS**

CROSS-REFERENCE ART COLLECTIONS

900 **INTERNET (E.G., INTERNET PHONE, WEBPHONE, INTERNET-BASED TELEPHONY)**
901 **VIRTUAL NETWORKS OR VIRTUAL PRIVATE NETWORKS**
902 **AUTO-SWITCH FOR AN INCOMING VOICE DATA, OR FAX TELEPHONE CALL (E.G., COMP/FAX/TEL)**
903 **PASSWORD**
904 **AUTO-CALLING**
905 **FAX MAIL**
906 **TOUCHTONE MESSAGE TRANSMISSION**
907 **SPEECH RECOGNITION VIA TELEPHONE SYSTEM OR COMPONENT**
908 **MULTIMEDIA**
909 **ALTERNATIVES**
910 **BAR CODE OR OPTICAL CHARACTER READER WITH TELEPHONE**

911 **DISTINCTIVE RINGING**
912 **GEOGRAPHICALLY ADAPTIVE**
913 **PERSON LOCATOR OR PERSON-SPECIFIC**
914 **PROGRAMMABLE TELEPHONE COMPONENT**
915 ."Soft" key
916 **TOUCH SCREEN ASSOCIATED WITH TELEPHONE SET**
917 **VOICE MENUS**

FOREIGN ART COLLECTIONS

FOR 000 **CLASS-RELATED FOREIGN DOCUMENTS**

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collection listed below. These collections contain ONLY foreign patents or nonpatent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

FOR 100 **HAVING NEAR FIELD LINK (E.G., CAPACITIVE, INDUCTIVE) (379/55)**
FOR 101 **HAVING ELECTROMAGNETIC LINK FOR SPEECH OR PAGING SIGNAL (E.G., LIGHT WAVE LINK) (379/56)**
FOR 112 **TELEPHONE LINE OR SYSTEM COMBINED WITH DIVERSE ELECTRICAL SYSTEM OR SIGNALLING (E.G., COMPOSITE) (379/90)**
FOR 113 .Credit authorization (379/91)
FOR 114 .Polling (e.g., audience survey) (379/92)
FOR 115 .With transmission of a digital message signal over a telephone line (379/93)
FOR 116 ..Including switching station (379/94)
FOR 117 ..Access restricting (379/95)
FOR 118 ..Including terminal for display of digital information (379/96)
FOR 119 ..By voice frequency signal (e.g., tone code) (379/97)
FOR 120 ...By modulated audio tone (379/98)
FOR 121 ...Having acoustic link (379/99)
FOR 122 .To produce visual-graphic copy reproduction (e.g., facsimile) (379/100)
FOR 123 .Audio program distribution (379/101)
FOR 124 .Remote control (379/102)
FOR 125 ..Of entrance or exit lock (379/103)
FOR 126 ..With indication (379/104)
FOR 127 ..From terminal (379/105)
FOR 128 .Remote indication over telephone line (e.g., telemetry) (379/106)
FOR 129 ..Meter reading (379/107)
FOR 130 .Telegraphy (379/108)
FOR 131 ..Over telephone line (379/109)
FOR 132 **COMPOSITE SUBSTATION OR TERMINAL (E.G., HAVING CALCULATOR, RADIO) (379/110)**
FOR 133 **WITH AUDIO MESSAGE STORAGE AND RETRIEVAL (379/67)**
FOR 134 .Stored in digital form (379/88)
FOR 135 ..Subscriber control of central office message storage or retrieval (379/89)
FOR 136 .DIAGNOSTIC TESTING, MALFUNCTION, INDICATION, OR ELECTRICAL CONDITION MEASUREMENT (379/1)
FOR 137 ..By loopback (379/5)
FOR 138 ..By analysis of injected tone signal (379/6)
FOR 139 ..By automatic testing sequence (e.g., programmable, scanning) (379/10)
FOR 140 .Of automatic switching equipment (379/15)
FOR 141 ..Fault detection or location (e.g., continuity, leakage) (379/26)
FOR 142 .Of subscriber loop or terminal (379/27)
FOR 143 ..Terminal arrangement to enable remote testing (e.g., testing interface) (379/29)
FOR 144 .Indication of nonstandard condition of telephone equipment (379/32)
FOR 145 ..SERVICE MONITORING OR OBSERVATION (379/34)
FOR 146 .Computer or processor control (379/112)
FOR 147 ..Call traffic recording (379/113)
FOR 148 ..Call charge metering or monitoring (379/114)

FOR 149 .....Interexchange operations (379/115)
FOR 150 **AT CENTRAL OFFICE (379/121)**
FOR 151 .Having line identification (e.g., automatic number identification-"ANI") (379/127)
FOR 152 **WITH CALLING NUMBER DISPLAY OR RECORDING AT CALLED SUBSTATION (379/142)**
FOR 153 .Other than coin (379/144)
FOR 154 .PRIVATE (E.G., HOUSE OR INTERCOM) OR SINGLE LINE SYSTEM (379/167)
FOR 155 .SPECIAL SERVICES (379/201)
FOR 156 ..Conferencing (379/202)
FOR 157 ..Operator control (379/203)
FOR 158 .Subscriber control (379/204)
FOR 159 ..Conference initiation by single calling sation (379/205)
FOR 160 ...At substation (379/206)
FOR 161 ....At plural exchange (379/207)
FOR 162 ..Priority override (e.g., butt-in) (379/208)
FOR 163 ...Repetitive call attempts (e.g., camp-on-busy, retry) (379/209)
FOR 164 ...Call diversion (e.g., call capture) (379/210)
FOR 165 ..Call forwarding (379/211)
FOR 166 ...Call transfer (379/212)
FOR 167 ...Intercept (e.g., dead or changed number) (379/213)
FOR 168 ...Secretarial or answering service (379/214)
FOR 169 ..Call waiting (379/215)
FOR 170 .Abbreviated dialing or direct call (e.g., hot line) (379/216)
FOR 171 ..Audible paging (379/217)
FOR 172 ..Performed by operator (e.g., butt-in, busy verification) (379/218)
FOR 173 .With interexchange network routing (379/220)
FOR 174 .Alternate routing (379/221)
FOR 175 ..Call distribution to operator (379/265)
FOR 176 ..Call queuing (379/266)
FOR 177 ..Repertory or abbreviated call signal generation (379/355)
FOR 178 ..With dynamic memory (379/356)
FOR 179 ...Insertable control element or circuitry (e.g., card) (379/357)
FOR 180 .Incoming call alerting (e.g., ringing) (379/373)
FOR 181 .With music or audible message generation (379/374)
FOR 182 ..With electronic call sounder (e.g., tone "ringer") (379/375)
FOR 183 ...With visual indication of incoming call (379/376)
FOR 184 **SUBSTATION OR TERMINAL CIRCUITRY (379/387)**
FOR 185 .For loudspeaking terminal (379/388)
FOR 186 ..With circuitry for voice control of transmission direction (379/389)
FOR 187 ..With amplification or attenuation level control (379/390)
FOR 188 **SUBSCRIBER LINE OR TRANSMISSION LINE INTERFACE (379/399)**
FOR 189 .Echo suppresion, antisinging, or reverse path blocking (379/406)
FOR 190 ..Disable or inhibit (379/407)
FOR 191 ..Control by pilot frequency signal (379/408)
FOR 192 ..Having variolosser or attenuator (379/409)
FOR 193 ..Echo cancellation (e.g., phase opposition) (379/410)
FOR 194 ...Having transversal filter (379/411)
FOR 195 .Having loudspeaking conversation capability (e.g., hands-free type or speakerphone) (379/420)
FOR 196 .Housing or housing component (379/428)
FOR 197 ..Handset structure (379/433)